What is claimed is:

1.   A method for multiplexing compressed video input data streams, each input data stream divided into video frames, into an output data stream with low latency, the method comprising:

    a. receiving each input data stream;

    b. providing an input buffer, the buffer capable of holding at least a maximum-size video frame for each input data stream; and

    c. when a given video frame in a given input data stream is larger than a threshold size, dividing the given video frame into at least a first part and a second part and rescheduling at least one part of the given video frame for transmission in the output data stream earlier than the corresponding frame time in the output data stream.

2. A method according to claim 1, wherein the threshold size is predetermined.

3. A method according to claim 1, wherein the threshold size is determined adaptively.

4. A method according to claim 1 wherein at least one of the input data streams is an MPEG-encoded video stream.

5. A multiplexer for combining a plurality of compressed video input data streams into an output data stream, each input data stream divided into video frames, the multiplexer comprising:

    a. logic for scheduling the transmission of video frames in the output data stream; and

    b. logic for dividing a given video frame in a given input data stream into at least a first part and a second part and rescheduling at least one part of the given video frame for transmission in the output data stream earlier than a corresponding frame time for the given video frame, when the given video frame is larger than a threshold size.

6. A multiplexer according to claim 5, wherein the threshold size is predetermined.

7. A multiplexer according to claim 5, wherein the threshold size is determined adaptively.

8. A multiplexer according to claim 5, wherein at least one of the input data streams is

an MPEG-encoded video stream.

9. A method for synthesizing a stable clock from a local clock and a data stream, the local clock subject to drift errors, comprising:

    a. reading a local clock time from the local clock, determining a reference time from the data stream and calculating an error value between the reference time and the local clock time until a predetermined number of error values have been calculated;

    b. grouping the error values into a plurality of groups and performing a linear regression on the minimum error value in each group and determining a clock drift error value and current drift rate; and

    c. synthesizing the stable clock including correcting the local clock using the clock drift error value and current drift rate.

10. A method according to claim 9 wherein the data stream includes multiplexed video streams.

11. A method according to claim 9 wherein the data stream is an MPEG-encoded video stream.

12. A device for synthesizing a stable clock from a local clock and a data stream, the local clock subject to drift errors, comprising:

    a. logic for reading a local clock time from the local clock, determining a reference time from the data stream and calculating an error value between the reference time and the local clock time until a predetermined number of error values have been calculated;

    b. logic for grouping error values into a plurality of groups and performing a linear regression on the minimum error value in each group and determining a clock drift error value and current drift rate; and

    c. logic for synthesizing the stable clock by correcting the local clock using the clock drift error value and current drift rate.

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